



NIST Combinatorial Methods Center

NCMC-14 Agenda

A DOE-EERE/NIST Joint Workshop on Combinatorial Materials Science for Applications in Energy

November 5, 2008 ♦ Bldg. 224 / Room B-245
November 6 – 7, 2008 ♦ Bldg. 101 / Lecture Room B

Wednesday, November 5, 2008 ♦ Afternoon

12:30 PM ***Arrival & Registration***

1:15 PM ***Welcoming Remarks & Introduction***

1:20 PM ***Invited Lecture***
Gary Sandrock, DOE-EERE
Hydrogen Storage Overview

Hydrogen Storage I: Detection and Characterization for Irreversible Chemical Hydrides and Reversible Hydrides

1:35 PM ***Invited Lecture***
Kevin Ott, LANL
Catalyst Screening

2:05 PM ***Invited Lecture***
Ewa Ronnebro, Sandia
Current Challenges and Needs in Metal Hydride Research

2:30 PM **Leo Bendersky**, NIST
Combi and HT Approaches for Thin Films

2:55 PM ***Break***

3:10 PM ***Invited Lecture***
TBD
Combi and HT Approaches for Complex Hydrides

3:35 PM ***Invited Lecture***
Marty Green, NIST
Combi and HT Approaches for Exploring Inorganic Materials

4:00 PM ***Invited Lecture***
Michael Fleischauer, NRC-National Institute for Nanotechnology
Combinatorial Electrochemical Methods

4:25 PM ***Breakout Groups – Discussion***

5:15 PM *Interim Discussion Reports*

5:45 PM *Adjourn*

Thursday, November 6, 2008 ♦ Morning

7:30 AM *Arrival & Registration*

8:25 AM *Welcome*
Eric Lin, Chief, Polymers Division, NIST

**Hydrogen Storage II: Detection and Characterization
for Hydrogen Adsorption Materials**

8:30 AM *Invited Lecture*
Anne Dillon, NREL
Overview of Hydrogen Sorption Materials

9:00 AM *Invited Lecture*
Andrew Cooper, University of Liverpool
Polymeric Hydrogen Adsorptive Materials

9:25 AM *Invited Lecture*
Joe Zhou, Texas A&M
Combi and HT Approaches for MOF Materials

9:50 AM *Invited Lecture*
Jochen Lauterbach, University of Delaware
Combi and HT Application of Spectroscopic Techniques

10:15 AM *Break*

10:30 AM **Michael Fasolka**, NIST
Overview of Combi for Soft Materials Science

10:55 AM *Invited Lecture*
Michael Smith, Symyx
Combi Technology for Soft Materials Measurements

11:20 AM *Invited Lecture*
Rick Ricker, NIST
Hydrogen Pipeline Safety

11:45 AM *Lunch: NIST Cafeteria*

Thursday, November 6, 2008 ♦ Afternoon

Fuel Cells and Membranes Session

- 1:00 PM *Introduction & Overview*
Kirt Page, NIST
- 1:10 PM *Invited Lecture*
Michel Foure, Arkema
State of the Art and Challenges in FC Membranes
- 1:40 PM *Invited Lecture*
Carson Meredith, GA Tech
A Combi Approach to Characterizing FC Membranes
- 2:10 PM **Kirt Page**, NIST
Morphological Measurements of FC Membranes
- 2:30 PM *Discussion*
- 2:45 PM *Break*
- 3:00 PM *Breakout Groups – Discussion (also using Dining Rooms A & B)*
- 4:00 PM *Plenary Lecture*
Richard Wool, University of Delaware
Sustainability
- 4:45 PM *Discussion Reports*
- 5:30 PM *Adjourn*
- 6:30 PM *Dinner (see details and Map in Workshop Handout)*

Friday, November 7, 2008 ♦ Morning

- 7:45 AM *Arrival*
- 8:25 AM *Welcome Back*
Kate Beers, NIST

Organic Photovoltaics Session

- 8:30 AM *Introduction and Overview*
Dean DeLongchamp, NIST
- 8:40 AM *Invited Lecture*
Russell Gaudiana, Konarka
The Role of Morphology in OPV Technology
- 9:05 AM *Invited Lecture*
Matt Reese, NREL
Combinatorial Exposure Rates for PV Aging

**NCMC-14 Workshop: A DOE-EERE/NIST Joint Workshop on Combinatorial Materials Science
for Applications in Energy**

- 9:30 AM [*Invited Lecture*](#)
David Ginger, University of Washington
SPM Methods for PV Performance Testing
- 9:55 AM **Dean DeLongchamp** or **David Germack**, NIST
NIST Polymers Program in OPV – Discussion
- 10:15 AM [*Break*](#)
- NCMC Update Session**
- 10:30 AM **Jun Young Chung**, NIST
Surface Wrinkling: A Powerful Tool for Measuring Material Properties
- 10:50 AM **Adam Nolte**, NIST
A Flexible Platform for Adhesion Measurements at Polymer and Biomaterial Interfaces
- 11:10 AM **Peter Johnson**, NIST
High-Throughput Measurements of Viscoelastic Properties Using Surface Indentation
- 11:30 AM **Edwin Chan**, NIST
Surface Wrinkles for Controlling Soft Material Adhesion
- 11:50 AM [*Lunch: NIST Cafeteria*](#)

Friday, November 7, 2008 ♦ Afternoon

- 1:15 PM [*New Customer Engagement Plan for NIST Polymers*](#)
Eric Lin, NIST
- NCMC Laboratory Tours and Demonstrations**
- 2:30 PM [*Lab Tours and Demonstrations*](#) – convene in the NCMC Labs, Building 224, Room B-207 (see the Lab Tours Handout in the Workshop Handout)
- 3:30 PM [*Adjourn*](#)

Please mark your calendars to join us at NCMC-15 on April 20 – 21, 2009!